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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/559,619

04/18/2006

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EXAMINER

PRICE, CRAIG JAMES

ART UNIT

PAPER NUMBER

3753

NOTIFICATION DATE

DELIVERY MODE

07/09/2010

ELECTRONIC

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

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USPTO@SUGHRUE.COM

<b>Office Action Summary</b>	<b>Application No.</b> 10/559,619	<b>Applicant(s)</b> MATSUZAWA ET AL.	
	<b>Examiner</b> Craig Price	<b>Art Unit</b> 3753	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) ☒ Responsive to communication(s) filed on 24 February 2010.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) ☒ Claim(s) 1 and 4-13 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1 and 4-13 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |   |   |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)         | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____                                      |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)         | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____   | 6) <input type="checkbox"/> Other: _____                          |

**DETAILED ACTION**

**STATUS OF CLAIMS**

Claims 1 and 4-13 are pending.

***Claim Rejections - 35 USC § 112***

Applicant's amendment overcomes the 35 USC 112 rejections.

***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

Claims 1,4 and 9-12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Rogers (1,462,942) in view of Taillandier (6,354,348) and further in view of Bronson (2,272,634).

Rogers discloses, as shown in Figures 1-3, a valve for a safety tire, equipped with “a charging opening” (see Figure 3, the upper end of 15, shown in Figure 3, is considered a charging opening in as much as applicant’s device is a charging opening) for charging gas into an outer gas chamber (13) and an inner gas chamber (14), which are provided in a tire (10) having a double structure. The valve for a safety tire comprising, an air-supply passage (the middle passage, 17 shown in Figure 2) for an inner gas chamber (14), which causes the charging opening and the inner gas chamber to communicate with each other, and an air-supply passage (the outer right passage 17, shown in Figure 2) for an outer gas chamber (13), which causes the charging opening and the outer gas chamber to communicate with each other, and a non-return valve member (23, in the middle passage of Figure 2) for an inner gas chamber, provided in the air-supply passage for an inner gas chamber, the non-return valve member for an inner gas chamber allowing gas to flow from the atmospheric side into the gas chamber and making it possible to prevent gas from flowing from the gas chamber into the atmosphere, and also allowing gas to flow from the gas chamber into the atmosphere by carrying out a predetermined operation (such as the operation of depressing the rod of 23), a non-return valve member (23, in the right passage of Figure 2) for an outer gas chamber, provided in the air-supply passage for an outer gas chamber, the non-return valve member for an outer gas chamber allowing gas to flow from the atmospheric side into the gas chamber and making it possible to prevent gas from flowing from the gas chamber into the atmosphere, and also allowing gas to flow from the gas chamber into the atmosphere by carrying out a predetermined operation (such as the operation of

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depressing the rod of 23). An engaging portion (the male threads of 16 engaging cap 26) that allows a filling adapter with a coupler to be mounted at the charging opening in only a fixed direction.

Firstly, regarding claims 1 and 12, Rogers is silent to having a detachment-restraining means for restraining detachment of the non-return valve member for an outer gas chamber is provided in the air-supply passage for an outer gas chamber at a position nearer to the charging opening than the non-return valve member for an outer gas chamber, and that the means for restraining detachment only restrains detachment of the nonreturn valve member for the outer gas chamber.

Secondly, regarding claim 1, Rogers is silent to having a filling adapter that includes a first passage that can supply gas to the inner gas chamber by communicating with the air-supply passage for an inner gas chamber, and includes a second passage that can supply gas to the outer gas chamber by communicating with the air-supply passage for an outer gas chamber so as to make a pressure difference between the outer gas chamber and the inner gas chamber, the engaging portion allowing the filling adapter to be mounted so that the air-supply passage for an inner gas chamber communicates with the first passage and the air-supply passage for an outer gas chamber communicates with the second passage.

Firstly, Bronson discloses a valve core assembly which teaches the use of a detachment- restraining means (18,27) for restraining detachment of the non-return valve member for an outer gas chamber is provided in the air-supply passage for an

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outer gas chamber at a position nearer to the charging opening than the non-return valve member for an outer gas chamber.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to employ a detachment-restraining means as taught by Bronson into the valve of Rogers in order to have "rapid inflation"(Col.4, Ins. 60-73) of the tire.

Secondly, regarding claim 1, Taillandier discloses a filling adapter (30) as shown in Figure 3, that includes a first passage (31) that can supply gas to the inner gas chamber by communicating with the air-supply passage for an inner gas chamber, and includes a second passage (32) that can supply gas to the outer gas chamber by communicating with the air-supply passage for an outer gas chamber so as to make a pressure difference between the outer gas chamber and the inner gas chamber, the engaging portion allowing the filling adapter to be mounted so that the air-supply passage for an inner gas chamber communicates with the first passage and the air-supply passage for an outer gas chamber communicates with the second passage.

Thirdly, Regarding claim 4, Rogers is silent to having "the" filling adapter with a coupler, which engages with a valve for a safety tire wherein the filling adapter is adapted to charge gas from a gas supply source into the outer gas chamber and into the inner gas chamber via the air-supply passage for an outer gas chamber and the air-supply passage for an inner gas chamber, the filling adapter comprising, a main body portion engaging with the valve for a safety tire, a second coupling provided in the main body portion and including a valve core connectable to a pressure source to allow gas from the pressure source to be supplied to the tire, an air chamber provided in the main

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body portion and connected to the second coupling, a first passage provided in the main body portion and causing the air chamber and the air-supply passage for an inner gas chamber to communicate with each other, a second passage provided in the main body portion and causing the air chamber and the air-supply passage for an outer gas chamber to communicate with each other, and differential pressure setting means provided in the second passage and distributing gas from the gas supply source to the first passage and the second passage so as to generate a pressure difference there between, and a first coupling connected to the second passage and allowing gas in the outer gas chamber to be released to the atmosphere by carrying out a predetermined operation.

Taillandier discloses that the filling adapter (30, see appended Figure 4 below) with a coupler (66), which engages with a valve for a safety tire wherein the filling adapter is adapted to charge gas from a gas supply source into the outer gas chamber and into the inner gas chamber via the air-supply passage for an outer gas chamber and the air-supply passage for an inner gas chamber (this limitation “for a safety tire...for an inner gas chamber” is considered as an intended use statement bearing no patentable weight), the filling adapter comprising, a main body portion (30) engaging with the valve for a safety tire, a second coupling (33) provided in the main body portion and including a valve core (36) connectable to a pressure source (through 34) to allow gas from the pressure source to be supplied to the tire, an air chamber (31) provided in the main body portion and connected to the second coupling, a first passage (15, 31) provided in the main body portion and causing the air chamber and the air-supply

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passage for an inner gas chamber to communicate with each other, a second passage (32) provided in the main body portion and causing the air chamber and the air-supply passage for an outer gas chamber to communicate with each other, and differential pressure setting means (43, piston, Col.4, Lns. 10-15) provided in the second passage and distributing gas from the gas supply source to the first passage and the second passage so as to generate a pressure difference there between, and a first coupling (49,50) connected to the second passage and allowing gas in the outer gas chamber to be released to the atmosphere by carrying out a predetermined operation (such as the operation of removing 49 and 50).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to substitute a filling adaptor as taught by Taillandier with the body (23) of Rogers in order to verify the pressures in each chamber (Col. 4, Lns. 3-5).

Regarding claim 10, Rogers discloses that the air-supply passage for the inner gas chamber is independent and separate from the air-supply passage for the outer gas chamber, as shown in Figure 2.

Regarding claim 11, Rogers discloses that the air-supply passage for the inner air chamber directly connects the inner gas chamber to the charging opening for the inner gas chamber and wherein the air-supply passage for the outer gas chamber directly connects the outer gas chamber to the charging opening for the outer gas



Claim 13 is rejected under 35 U.S.C. 103(a) as being unpatentable over Rogers (1,462,942), Taillandier (6,354,348) and Bronson (2,272,634) as applied to claim 1 above, and further in view of Ishiwata (2002/0020450).

Rogers, Taillandier and Bronson have disclosed all of the features of the claimed invention although are silent in having the engaging portion which allows the filling adapter with the coupler to be mounted at the charging openings in only the fixed direction so as to prevent the pressures in the air-supply passages from being accidentally set inversely.

Ishiwata discloses a coupling device which teaches the use of engaging portions, having key grooves and projections (paragraph 0046) which serve to properly align a coupling device while mating two coupling halves.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to employ engaging portions as taught by Ishitawa into the combined device of Rogers, Taillandier and Bronson in order to ensure the appropriate coupling halves are connected together (paragraph 0046, "the angle is settled depending on the properties of a fluid used", the couplings have engaging portions which permit the appropriate couplings to mate together so as to not mix fluids from one system to the next).

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Mar. 12, 2002

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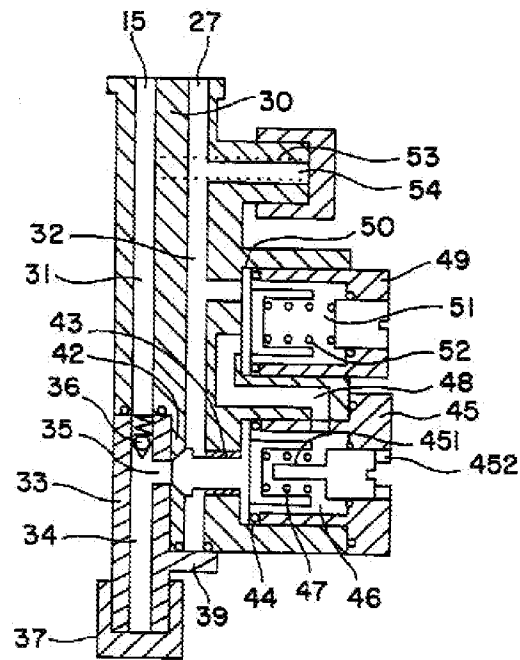


FIG. 3

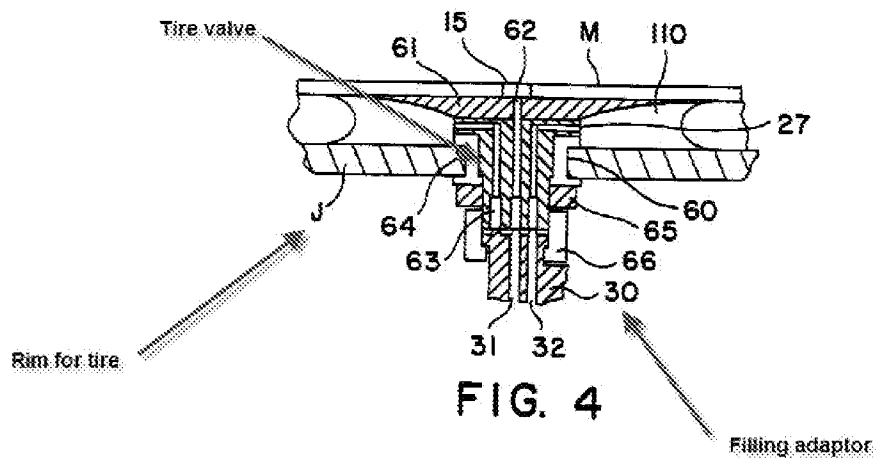


FIG. 4

Claims 5-8 are rejected under 35 U.S.C. 103(a) as being unpatentable over Rogers (1,462,942) in view of Taillandier (6,354,348) further in view of Bronson (2,272,634), as applied to claim 1 above, and further in view of Hawkes (3,422,836).

Regarding claim 5, Taillandier discloses a main body portion (30, see Figure 3) and operating means (the face of 30 near the openings of 15, 27) of Taillandier engages with the valve of Bronson, which is capable of performing the causing of gas in the inner gas chamber and gas in the outer gas chamber to be released to the atmosphere so as not to expand the air pocket, by carrying out a predetermined operation (such as the connection of the device) with respect to the non-return valve member for an inner gas chamber and the non-return valve member for an outer gas chamber of the valve for a safety tire when the main body portion is engaged with the valve for a safety tire.

Bronson and Taillandier are silent to having a rim which forms an outer gas chamber between the pneumatic tire and the air pocket when the pneumatic tire and the air pocket are mounted.

Hawkes discloses a dual chambered tire which teaches the use of a rim (1) which forms an outer gas chamber between the pneumatic tire and the air pocket when the pneumatic tire and the air pocket are mounted.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to substitute a tire and rim system as taught by Hawkes with the tire and rim system of Bronson as one would have expected the device to perform as equally as well.

Regarding method claims 6 and 7, the device shown by Bronson in combination with Taillandier and Hawkes will perform the methods as recited in claims 6 and 7, during normal operational use of the device.

Regarding claim 8, Taillandier discloses in combination with Bronson and Hawkes that the pressure releasing method according to claim 7, wherein the operating means includes a first protruding portion for operating the non-return valve member for an inner gas chamber, and a second protruding portion for operating the non-return valve member for an outer gas chamber, and the first protruding portion (the protruding portion of 45 is longer than 49, as shown in Figure 3) is longer than the second protruding portion.

Claim 9 is rejected under 35 U.S.C. 103(a) as being unpatentable over Rogers (1,462,942) in view of Taillandier (6,354,348) further in view of Bronson (2,272,634), as applied to claim 1 above, and further in view of Gardner (5,658,159).

Rogers is silent to having the engaging portion which has a positioning hole that receives a positioning pin of the filling adaptor.

Gardner et al. disclose two connecting devices which teaches the use of a positioning hole (22) that receives a positioning pin (20) of a mating adaptor, as shown in Figure 8.

It would have been obvious to one of ordinary skill in the art at the time of the invention was made to employ a pin and hole as taught by Gardner et al. in order to

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assist in keeping the mated connectors rigidly aligned along the longitudinal axis (Col. 4, Lns. 40-49).

### ***Response to Arguments***

Applicant's arguments, filed 2/24/2010, with respect to claims 1 and 4-13 have been considered but are not persuasive.

Applicant argues that there is no motivation for combining Rogers and Taillandier, yet Taillandier discloses that this portion of the invention is used to verify the pressures in each chamber (Col. 4, Lns. 3-5). Applicant further argues that Rogers further teaches away from using a filling adapter to apply different pressures to each of the chambers, yet the limitation “for the outer gas chamber so as to make a pressure difference” is written in a manner that this is considered as an intended use recitation and/or a functional limitation which is not given patentable weight. Applicant argues that Rogers does not use or need a separate filling adapter, yet inherently a filling adapter must be used to put air into the tire. In response to Applicant's argument that the Examiner's conclusion of obviousness is based upon improper hindsight reasoning, it must be recognized that any judgement on obviousness is in a sense necessarily a reconstruction based upon hindsight reasoning. But so long as it takes into account only knowledge which was within the level of ordinary skill in the art at the time the claimed invention was made, and does not include knowledge gleaned only from applicant's disclosure, such a reconstruction is proper. In re McLaughlin, 443 F.2d 1392; 170 USPq 209 (CCPA 1971).

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Applicant's arguments that the valve and the filling adapter are separately claimed are not persuasive, as although the claims are separately claimed in two claims, this does not give the structure that the devices are structurally separate from one another.

Applicant's arguments that there is no reasoning that the device of Bronson could be placed only in the valve member for the outer gas chamber is not persuasive. In response to Applicant's argument that the Examiner's conclusion of obviousness is based upon improper hindsight reasoning, it must be recognized that any judgement on obviousness is in a sense necessarily a reconstruction based upon hindsight reasoning. But so long as it takes into account only knowledge which was within the level of ordinary skill in the art at the time the claimed invention was made, and does not include knowledge gleaned only from applicant's disclosure, such a reconstruction is proper. In re McLaughlin, 443 F.2d 1392; 170 USPq 209 (CCPA 1971).

### ***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Craig Price whose telephone number is (571)272-2712. The examiner can normally be reached on 8AM - 4:30PM Mon-Fri, Increased flex time.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Robin Evans can be reached on (571) 272-4777. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

CP  
/C. P./  
Examiner, Art Unit 3753

23 June 2010

/Robin O. Evans/  
Supervisory Patent Examiner, Art Unit 3753